

Remarks

Claims 1-9, 13-19, and 28-46, and 56-64 are pending in the application. Claims 10-12, 20-27, and 47-55 were withdrawn from consideration based on an election of species requirement. Claims 1, 35, 40, and 56 have been amended. No new matter has been added by virtue of this response. Reconsideration of the application in view of this response is requested.

Claim Rejections - 35 U.S.C. § 112

The Examiner rejects claims 29 and 35 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner states that "claim 1 recites that the time varying input tuning input signal that is applied to the control input 'is independent of a signal amplified by said power amplifier,' yet claim 29 says that an envelope detector is connected to the control input and is 'responsive to an input RF signal.' The 'signal to be amplified by said power amplifier' is the input RF signal and thus claim 29 is contradictory to that of claim 1 that requires signal applied to the control input to be independent."

Applicant agrees with the examiner that the time varying tuning input signal in claim 1 must be independent of a signal amplified by the power amplifier.

Applicant would ask the examiner to consider that the RF signal in claim 29 is illustrated by the input signal at pin 80 shown in FIG. 9 of the present application. It is clear from this figure that the RF signal at pin 80 is certainly not the signal amplified by the power amplifier at pin 18 or any other location after power amplifier 10. Nor is the RF signal at pin 80 dependent on the signal amplified by the power amplifier since it is derived from the RF signal at pin 80, a location in the circuit diagram before amplification by the power amplifier. The input RF signal at pin 80 has no dependence on the amplified signal at location 13 or 18 (even though the amplified signal is of course dependent on the input signal). The dependency is one way. The amplifier operates on the input signal and changes it to become the amplified output signal. But the amplifier does not determine what the input signal was before it operated on it.

Claim 35 has been amended to fix the problem cited by the Examiner.

Claim Rejections - 35 U.S.C. § 103(a)

The Examiner rejects claims 1-9, 13-19, 28, 30-34, 36-38, 40-46, and 56-64 under 35 U.S.C. § 103(a), as being unpatentable over Bosse in view of Clar as evidenced by Ishii. Claim 1, states:

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1. An electronically tuned circuit, comprising a power amplifier coupled to provide amplified signal to an electronically tunable output network, said power amplifier capable of being operated in a large-signal mode, said output network including an electronically tunable reactive component, a control line, and a control input, wherein said control input is connected to a time varying tuning input signal, wherein electronic tuning of said electronically tunable reactive component includes non-motor operated electronic tuning when said power amplifier is operated in said large-signal mode, wherein said control line extends to said electronically tunable reactive component for providing a control signal derived from said time varying tuning input signal, wherein said control signal varies over more than two values for electronically varying reactance of said electronically tunable reactive component over more than two values, wherein said time varying tuning input signal is independent of a signal amplified by said power amplifier.

Applicant would respectfully ask the Examiner to consider that Bosse does not teach or suggest that "a power amplifier coupled to provide amplified signal to an electronically tunable output network, said power amplifier capable of being operated in a large-signal mode," as provided in claims 1, 40, and 56, as amended.

Bosse provides a tunable oscillator circuit for receiving a weak UHF signal at one of two frequencies that then provides that signal to a UHF amplifier, as described by Bosse in column 3, lines 19-22 and lines 33-34. Thus, the electronically tunable components of Bosse are not an electronically tunable output network of a power amplifier. Rather they are input circuits to a power amplifier. The electronically tunable components of Bosse receive weak signals that have not yet been amplified. They do not receive large signals.

The Examiner recognizes that "Bosse is silent on in the Figure 5 embodiment with respect to that of claims like claim 1 of the instant invention is the calling of the common emitter amplifier 50 a 'power amplifier.'"

Applicant would respectfully ask the Examiner to consider that common emitter amplifier 50 is not a power amplifier. Bosse states its purpose: "any amplification differences for the two frequency bands are equalized. This is accomplished by connecting the output or collector electrode of the transistor 50 by means of a capacitor 51 to a tapping point 52 of the resonant circuit inductor 53." Thus, amplifier 50 is just for equalizing amplitude of the two weak signals as they pass through the circuit.

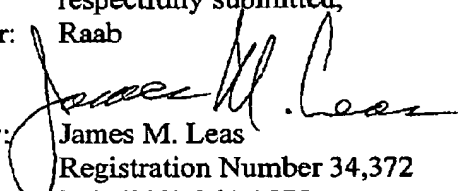
While Clar provides a power amplifier, there is no teaching or suggestion as to how to substitute a power amplifier for amplifier 50 and have the circuit of Bosse work for its intended purpose as a UHF receiving resonant circuit that feeds a power amplifier. Bosse would then have two power amplifiers, one before and one after his tunable resonant circuit. As described in Amendment D, the tunable capacitors would introduce

harmonics distorting the signal, and none of the references teach how to avoid that. It was applicant who accomplished that. More invention would be needed to make such a dual power amplifier device work properly, avoid distortion, and consider how to use it.

Applicant would ask the Examiner to consider that Clar does not teach electronically tuned variable capacitors. His variable capacitors are mechanical. If the teachings of Clar were introduced into Bosse, as suggested by the Examiner, one of ordinary skill would also consider replacing the electronically tunable capacitors of Bosse with the mechanically tunable capacitors of Clar since mechanically tunable capacitors have a fixed capacitance that does not vary with amplitude of the applied signal. By doing so the harmonics would be avoided. Thus, even combining the references to produce the dual amplifier structure would still not produce the invention as claimed.

Applicant would ask the Examiner to consider that the ideas of Bosse and Clar are similar to the ideas of Shenai and Sokol more fully addressed in amendment D, and applicant would refer the Examiner to the detailed discussion in that amendment.

It is believed that the claims are in condition for allowance. Therefore, applicant respectfully requests favorable reconsideration. If there are any questions please call applicant's attorney at 802 864-1575.

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